



Strategic Weapons in the 21st Century: *The New Dynamics of Strategic Conflict and Competition*

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Background Reading For Those Interested

Key workshop questions:

- How is the problem of strategic conflict changing? Why?
- How is the problem of strategic rivalry shaping up?
- How do adversaries think about and prepare for conflict and competition with the U.S.?
- What should the United States and its allies do to safeguard their interests?

Panel 1: Defining Strategic Conflict and Competition in the 21st Century

- How do Russia and China understand the strategic dimension of war with the United States and its allies? How do they imagine being successful in such a war? And in circumstances short of war?
- How do Russia and China compete with the United States? Towards what ends?
- What are the prospects for dangerously intensified competition? And for conflict?

Barrass, Gordon, and Nigel Inkster. "Xi Jinping: The Strategist Behind the Dream." *Survival* 60, no. 1 (2018): 41-68. <https://www.tandfonline.com/doi/full/10.1080/00396338.2018.1427363>.

The authors argue that Chinese strategic thinking is heavily influenced by both Sun Tzu and Andy Marshall, particularly their ideas about non-military means of conflict resolution and long-term competition.

Bendett, Samuel, and Elsa B. Kania. "Chinese and Russian Defense Innovation, with American Characteristics? Military Innovation, Commercial Technologies, and Great Power Competition." *The Strategy Bridge* (2018). <https://thestrategybridge.org/the-bridge/2018/8/2/chinese-and-russian-defense-innovation-with-american-characteristics-military-innovation-commercial-technologies-and-great-power-competition>

Bendett and Kania review the approaches of China and Russia to technological innovation for military modernization, concluding that these efforts could challenge U.S. primacy in technological innovation in the future.

Johnson, Dave. "Russia's Conventional Precision Strike Capabilities, Regional Crises, and Nuclear Thresholds." *Livermore Papers on Global Security*, No. 3. Livermore: CGSR, February 2018. <https://cgsr.llnl.gov/content/assets/docs/Precision-Strike-Capabilities-report-v3-7.pdf>.

This paper explores nuclear thresholds in Russian military doctrine with an eye to understanding how Russian thinking integrates the operational effects of conventional strikes with nuclear deterrence and coercion in regional war.

Laird, Burgess. War Control: Chinese Writings on the Control of Escalation in Crisis and Conflict. Washington DC: Center for a New American Security, March 30, 2017. <https://s3.amazonaws.com/files.cnas.org/documents/CNASReport-ChineseDescalation-Final.pdf?mtime=20170328141457>.

Drawing on a comprehensive review of PLA writings on escalation of crises and conflicts that have appeared since 2008, this report concludes that China's thinking is well developed and raises major concern for U.S. strategy.

Nacht, Michael, Sarah Laderman, and Julie Beeston. "Strategic Competition in China-U.S. Relations." *Livermore Papers on Global Security*, No. 5. Livermore: CGSR, October 2018. https://cgsr.llnl.gov/content/assets/docs/CGSR_livpaper5.pdf. 3.

This paper explores China's approach to strategic competition with the United States and sets out the main elements of a countering U.S. approach.

Persson, Gudrun (ED.) *Russian Military Capabilities in a Ten-Year Perspective – 2016*. FOI-R-4326-SE, FOI, Sweden, December 2016.

The report assesses Russian military capability and finds that Russian armed forces are now in a better position to both defend Russia from foreign aggression and exert coercive force on other states as compared to 2013 (time of previous FOI report).

Zysk, Katarzyna (2018), "Escalation and Nuclear Weapons in Russia's Military Strategy," *The RUSI Journal*: <https://doi.org/10.1080/03071847.2018.1469267>

Zysk reviews the debate over Russia's strategy for regional war, weighs the available evidence, and concludes that "escalate-to-deescalate" poses real problems for the West.

Panel 2: Integrating for Effective Strategic Deterrence

- Why has the focus of U.S. thinking shifted from “cross domain” to “multi domain” to “integrated strategic” deterrence?
- What does deterrence “integration” mean to Russia and China?
- Is the US adequately prepared to deter across the full spectrum of potential combat operations, including in the “new” domains? How can it be better prepared?
- What are the different roles of nuclear and non-nuclear means in an integrated approach?

Center for Global Security Research, Lawrence Livermore National Laboratory. *Strengthening Deterrence for 21st Century Strategic Conflicts and Competition: Accelerating Adaptation and Integration*. Workshop Summary. Livermore: CGSR, 14- 15 November 2017.

https://cgsr.llnl.gov/content/assets/docs/CDD_4_BHR_final_formatted.pdf.

See also: https://cgsr.llnl.gov/content/assets/docs/CDD_Report_Nov_2016_FINAL.pdf.

These two-day CGSR workshops focused on the challenges of integrating across domains and regions for a more up-to-date deterrence strategy.

Chairman of the Joint Chiefs of Staff General Dunford. “The Character of War & Strategic Landscape Have Changed.” DoD Live (blog). April 30, 2018.

<http://www.dodlive.mil/2018/04/30/dunford-the-character-of-war-strategic-landscape-have-changed/>.

General Dunford analyzes the changing nature of warfare, the new challenges of deterrence, and the urgency of steps to improve global integration of plans and operations.

Manzo, Vincent. “Deterrence and Escalation in Cross-domain Operations: Where Do Space and Cyberspace Fit?” *Strategic Forum*, National Defense University, December 2011.

<http://ndupress.ndu.edu/Portals/68/Documents/stratforum/SF-272.pdf>

Manzo describes the challenges of cross-domain integration but also recommends a pathway forward.

Panel 3: Fostering a Competitive Mindset

- How is a “competitive mindset” different from a “deterrence mindset?”
- How do we out-think, out-partner, and out-innovate potential adversaries, as called for in the National Defense Strategy?
- What are the potential benefits and risks of intensified all domain strategic competition?

Brands, Hal. “The Lost Art of Long-Term Competition.” *The Washington Quarterly*. Volume 41, Issue 4, (2018): 31-51. <https://www.tandfonline.com/doi/full/10.1080/0163660X.2018.1556559>.

The author sets out the main principles of long-term competition in order to succeed in the geopolitical rivalries playing out today, arguing that such competition requires a willingness to accept certain risks and higher tensions in key relationships.

Center for Global Security Research, Lawrence Livermore National Laboratory. *5th Annual LLNL Deterrence Workshop Multi-Domain Strategic Competition: Rewards and Risks*. Workshop Summary. Livermore: CGSR, November 2018.
https://cgsr.llnl.gov/content/assets/docs/Deterrence_Workshop_Summary_Final2018.pdf.

This workshop explored the challenges of out-thinking, out-partnering, and out-innovating major power competitors.

Friedberg, Aaron L. “Competing with China.” *Survival* 60, no. 3 (2018): 7-64.
<https://www.tandfonline.com/doi/full/10.1080/00396338.2018.1470755>.

Friedberg argues for a new U.S. China strategy that includes stepped-up balancing and constrained engagement, each of which comprises two components: (1) diplomacy and defense and (2) economic and information operations.

Mahnken, Thomas G. *Cost-Imposing Strategies: A Brief Primer*. Washington DC: Center for a New American Security, November 2014.
<https://www.cnas.org/publications/reports/costimposing-strategies-a-brief-primer>.

In this primer on competitive strategies, Mahnken identifies the potential roles of cost-imposing strategies in dealing with long-term challenges during peacetime, focused particularly on the Asia-Pacific.

Marshall, Andy W. *Long-Term Competition with the Soviets: A Framework for Strategic Analysis*. Santa Monica, CA: RAND Corporation, 1972.
<https://www.rand.org/pubs/reports/R862.html>.

In this pioneering 1972 report, Marshall develops a framework for analysis of the long-term strategic arms competition between the United States and the Soviet Union.

Miller, Jr., James N., and Richard Fontaine. *Navigating Dangerous Pathways: A Pragmatic Approach to U.S.-Russian Relations and Strategic Stability*. Washington DC: Center for a New American Security, January 2018.

<https://www.cnas.org/publications/reports/navigatingdangerous-pathways>.

Miller and Fontaine set out three alternative pathways for managing strategic competition with Russia.

United States Department of Defense (2018), *Summary of the National Defense Strategy*:

<https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>

This unclassified summary of the 2018 National Defense Strategy sets out the key ideas of the administration about the nature of the competition and the requirements of success.

See also: National Defense Strategy Commission, *Providing for the Common Defense: The Assessment and Recommendations of the National Defense Strategy Commission*. Washington DC, November 2018. <https://www.usip.org/publications/2018/11/providing-common-defense>.

The Commission concludes that DoD has set out the right goals but has not set out the right ideas about how to compete effectively in a period of prolonged major power rivalry.

Panel 4: Improving the Impacts of S&T on National Security

- What is the role of S&T in this effort?"
- What are the lessons for DOE of recent DoD efforts to accelerate defense innovation? Are there lessons for the nuclear complex?
- What can be done to accelerate the development of high-leverage strategic technologies? How can the private sector be more effectively engaged in accelerating innovation?
- How can the national laboratories become more effective in delivering technical solutions in an increasingly dynamic technology environment?

Defense Research Enterprise Assessment. Defense Science Board, Department of Defense, January 2017.

http://www.acq.osd.mil/dsb/reports/2010s/Defense_Research_Enterprise_Assessment.pdf

This report identifies steps to maintain and enhance the defense research enterprise through more open innovation and more active participation in the DoD requirements process.

Defense Science Board Report on Technology and Innovation Enablers for Superiority in 2030. Defense Science Board, Department of Defense, 2013.

<http://www.acq.osd.mil/ecp/DOCS/DoDGuidance/DSB2030.pdf>

This study provides a framework for the analysis of investment strategies to support military capabilities required in 2030.

Gerstein, Daniel M. “The Military’s Search for Innovation.” *The Rand Blog* (blog), August 13, 2018. <https://www.rand.org/blog/2018/08/the-militarys-search-for-innovation.html>.

Gerstein argues that the establishment of formal centers for innovative thought do not guarantee innovation and that the role of culture in the success of innovation should not be underestimated.

Kramer, Franklin and James Wrightson, Jr. *Innovation, Leadership and National Security*. Washington DC: Atlantic Council, April 2016.
<https://www.atlanticcouncil.org/publications/reports/innovation-leadership-and-national-security>.

Kramer and Wrightson assess the challenges to innovation and recommend steps to increase governmental focus and effectiveness, with a particular emphasis on steps that expand synergy between national security agencies and the private sector.

“Promoting DoD's Culture of Innovation.” Statement of Dr. Mike Griffin, Under Secretary of Defense for Research and Engineering before the House Armed Services Committee, 17 April 2018. <https://docs.house.gov/meetings/AS/AS00/20180417/108132/HHRG-115-AS00-Wstate-GriffinM-20180417.pdf>.

Griffin argues that DoD must be willing and able to tap into commercial research, given its potential military applications, while also reforming operational and organizational practices to accelerate integration of those capabilities.

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